

# W5YI

National Volunteer Examiner Coordinator

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

Fred Maia, W5YI, Editor, P.O. Box 565101, Dallas, TX 75356-5101

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## 220-222 MHz RECONSIDERATION REQUESTED

The FCC is being flooded with *Petitions for Reconsideration* involving the Amateur Radio Service. Most, although not all, are protesting the recent reallocation of 220-222 MHz to the land-mobile service. The American Radio Relay League filed their *Petition for Reconsideration* on Gen. Docket 87-14, with the FCC last week.

The League maintained that in appropriating the band from the Amateur Radio Service and allocating it for the development of narrowband techniques for the land-mobile service, the Commission ignored the comments of more than 5,000 amateur radio operators, numerous public service and relief agencies ...and others which opposed the reallocation. The League also charged that the FCC:

- (1.) ...clearly "predetermined" the outcome of the proceeding;
- (2.) ...failed to address the arguments of the amateur commenters;
- (3.) ...extended the reply comment dates after the deadline;
- (4.) ...accepted comments from the *United Parcel Service* more than six months after the close of the already extended comment dates because the record lacked support for the position the Commission had already chosen;
- (5.) ...refused to release internal documents under the *Freedom of Information Act* supporting the need for additional land mobile spectrum;
- (6.) ...allocated permanent spectrum to narrowband ACSSB technology which is still in the developmental stage;

(7.) ...failed to disclose the data on which its assumptions were based, thus depriving commenters of the ability to evaluate that data;

(8.) ...greatly overstated the spectrum efficiency of ACSSB to Congress;

(9.) ...refused to consider reasonable spectrum alternatives in the 30-50 MHz band;

(10.) ...never considered replacement spectrum for displaced amateur users at 220-222 MHz and;

(11.) ...reached conclusions concerning the need for additional land mobile allocations, the amateur's use of the 220-MHz band ...and the ability to reaccommodate displaced amateur users without relevant, or adequate data.

The well-done *Petition for Reconsideration*, filed by ARRL counsel, **Chris Imlay/N3AKD**, said, "In fact, if there is any need at all for additional land mobile spectrum, which is not quantified in the record, there are alternatives to depriving the Amateur Radio Service of a critical portion of its most rapidly developing band."

"If narrowband systems have failed in the 150 MHz band, it is either because they are inherently undesirable, or because the Commission has failed to provide any regulatory guidance to encourage use in existing bands, to curb the wasteful present users of spectrum there. If narrowband techniques are going to be useful, then they will have to be useful in existing bands. If the Commission is not ready to require their use in existing bands, they then are not ready for a separate spectrum allocation either. Even if they were, other bands, such as

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Imlay noted that "at the Commissioner's Open Meeting on August 4, 1988, Commission Quello stated that he 'hoped' the amateurs had enough spectrum. In this band, clearly the Amateur Radio Service does not, and spectrum allocation decisions which have such a profound effect on the Service should not be premised on unsupported 'hopes' and assumptions not based on the record."

The *Petition for Reconsideration* notes that the Commission failed to address an internal FCC study which revealed that 66% of the spectrum in the 800-MHz land mobile band was unoccupied. The ARRL said it would not have been difficult ...to carve out a block of VHF channels for exclusive use of ACSSB emissions in the VHF bands by reaccommodating existing, wideband FM users to the newly allocated 16 MHz of spectrum from the land mobile reserve band. This alternative was raised in the Comments, but ignored in the *Report and Order*."

The real issue," the League noted, "is the worth to the nation" to have, free of cost to the taxpayer and the public relief agencies, an adequate

The ARRL requested that the "Commission reconsider and reverse its decision and grant the Amateur Radio Service primary use of the 220-225 MHz band."

## "TV ANSWER" ASKS RECONSIDERATION

They raised the following points:

- (1.) Due to physical and economic reasons, the *TV Answer System* must operate in the VHF band.
- (2.) The *System's* present capability of providing a diverse array of services to tens of millions of televisions households, while employing only one-half MHz of the 220-222 MHz band constitutes far more efficient use of that portion of the spectrum than the speculative promise of future narrowband services offered by the land-mobile industry. The *TV Answer System* is capable of receiving and processing upwards of 1 million viewer responses per minute, including identifying each response with a particular household.
- (3.) The reallocation sought by TVA could be accomplished without disrupting any existing service and without inhibiting the development of those new land-mobile services.
- (4.) There is general agreement among colleges with video instructional systems, cable operators, broadcasters ...and other video service providers as to the need for an interactive viewer response device.
- (5.) The *System* could increase pay-TV revenues by 100%, home-shopping service sales by 10% and overall advertising revenue by 5%. Full scale deployment of the *TV Answer System* would increase total annual broadcast revenues by \$1.7 billion.
- (6.) No existing or proposed technology appears

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to have anything near the capacity of the TV Answer System to provide an efficient, easy-to-use viewer-response capability in "real time."

(7.) There is little use of the 220-222 MHz band by the amateur service.

(8.) The public interest benefits from the TVA System far outweigh the minimum decrease in potential service to the land-mobile industry from yet-to-be-developed narrowband technology.

TVA requests reconsideration of an application for one-half MHz from the 220-222 MHz band -- "with the remaining one and one-half MHz being reallocated for narrowband land-mobile services ...or left with the amateur service."

[Petition for Reconsideration filed October 6, 1988]

## SIDEBAND ON THE 30 METER HAM BAND

On October 13, the FCC received a request from **Anthony J. Sivo, W2FJ**, of Plainsboro, N.J. asking that denial of his petition (assigned RM-6363) be reexamined. Sivo had petitioned the FCC seeking amendment to Section §97.61(a) of the Commission's Rules to permit emission J3E (single sideband telphony) in the 30-meter Amateur band.

Sivo argued that the denial order attributed several comments to a **Mr. Jan Clute/KF0Z**. "These entered comments are in direct disregard to Section §1.405 paragraph (a) of the Rules stating in part, that comments on a petition for rule making 'shall be accompanied by proof of service upon the petitioner on or prior to the date of filing...'" Sivo said since he was not furnished with a copy of the Clute comments, he was at a disadvantage and unable to reply to his arguments. "Because of this procedural error, the petitioner requests that any and all comments attributed to Mr. Clute and having a direct influence on the resulting decision be stricken from the record."

Sivo also took issue with the ARRL contention that "There is a great deal of amateur communications conducted 24 hours a day in that band." While Sivo said in his reply comments that he was willing to accept the monitoring reports from FCC Field Monitoring Services as being unbiased, "The Chief, PRB, apparently opted to accept one person's word against another's." Sivo said "since the Chief, PRB, apparently regards the number of unsubstantiated observations to be important, I am enclosing copies of several articles, both from this country and from the United Kingdom, written by

users of the 10.1 MHz band, expressing their observations on the occupancy of the 30 meter band. These independent comments confirm my own observations that the 10.1 MHz band is under utilized and that this band is not as well used as the ARRL claims."

Sivo said that although "telephony is available on six other HF bands and that another HF band will become available soon, allowing increased allocations to telephony operations, it is not the issue here. Yet, the Chief, PRB, in his denial mentioned it twice."

In support of his request, Sivo stated that **Les Moxon/G6XN**, a professional research engineer, is doing a study on "chordal-hop propagation" in the region of the 10.1 MHz band. Moxon is of the opinion that J3E emissions will better serve his needs in making the necessary propagation observations and measurements.

"There is a need for J3E emissions on the 10.1 MHz band. Since J3E emissions are permitted on all the other HF bands, it becomes a matter of even handedness and fairness in permitting J3E emissions on the 10.1 MHz band," Sivo said in summing up. "With modern receivers and updated receiving techniques, co-sharing of the 10.1 MHz band is practical. Such co-sharing has been demonstrated successfully on other bands. The radiotelephone operator is as concerned as any other operator regarding the non interference requirement to the primary users." Sivo requested that the instant petition, RM-6363, be given reconsideration and "in accordance with Section §1.115 of the Commission's Rules, 47 C.F.R. §1.115, the petitioner requests a review of the action taken by the Chief, PRB, by the full Commission."

Sivo attached several exhibits including:

(1.) ...an editorial by **Chod Harris/VP2ML**, editor of The DX Bulletin stating in part "The sum total of 30 meter DX reports in the past two years wouldn't fill a single column in Bandpass. ...we need to increase amateur activity on 30 meters, or risk losing the band to the spectrum-hungry shortwave broadcasters at the next WARC in the 1990's."

(2.) ...an article written by a CW operator and published in the U.K.'s *Radcom Technical Topics* confirming "a low level of [10.1 MHz] activity on what should be a most interesting and valuable allocation suggests that it is more than time that we pay atten-

tion to the seemingly-valid technical arguments in favor of ssb activity in part of the band."

(3.) A seven page report on "*The Use of SSB on the New Amateur 10-MHz Band*" written by **Les Moxon/G6XN** asking for "removal of the I.A.R.U. embargo in the use of ssb on 10-MHz [which] will greatly assist activities which are expected to strengthen the case for amateur use of the band and provide also a strong case for an additional allocation in the region of 12 MHz."

[Petition for Reconsideration filed October 11, 1988.]

## REPEATER COORDINATION - MID-AMERICA

The **Mid-American Coordination Council, Inc.** has added the state of Colorado as its newest member. MACC now oversees the repeater coordination activities in ten states (Illinois, Iowa, Kansas, Minnesota, Missouri, Colorado, Nebraska, Oklahoma, South Dakota and Wisconsin) ...representing about one fifth of the area and amateur population of the United States.

Coordination in metropolitan Kansas City remains clouded, however, due to controversy between the *Mo-Kan Council of Clubs* and the MACC. The League board, which previously sanctioned (except in Kansas City) MACC as the acknowledged regional frequency coordinating organization for Kansas and Missouri, has reversed themselves and now recognizes the entire states of Kansas and Missouri as being in dispute.

The League's previous position was hampered out during a six hour meeting between several ARRL Directors and counsel, **Chris Imlay/N3AKD**. The Board decided in late August, however, that a "technical correction" to their September QST stated position on Kansas and Missouri coordination was in order. An erratum was published on page 65 of the October issue.

Neither state will be listed in the ARRL's *Repeater Directory* until the differences are ironed out which, according to the League, could be accomplished "by mediation, arbitration or other means." President **Ken Enenbach/KC0WX** of the *Missouri Repeater Council, Inc.*, contends that Kansas and Missouri are being punished by the ARRL because they "have not accepted outside pressure to our local problem." Many amateurs consider listing in the League's *Repeater Directory* very important since the FCC has referred to the publication as the apparent de facto standard register of approved

amateur coordinations. The League's directory will also exclude 220-MHz coordinators in Southern California.

MACC is now concerned that since the ARRL has withdrawn their support of Kansas MACC coordination authority, their assignments in Wichita, Topeka, Salina, Garden City, Liberal, and Dodge City, Kansas are in jeopardy. They also claim that St. Louis has "a town full of uncoordinated repeaters because ARRL claims that the (MACC affiliated) *Missouri Repeater Council* is in conflict with the *Mo-Kan Council of Clubs*."

**SERA, Inc., (South Eastern Repeater Association, Inc.)** which represents wide scale amateur repeater coordination interests in the south east, is alarmed and outraged by the ARRL's "demonstrated undependability of decision" and continue their copyright on their recognized coordinations. SERA also questions the advisability of a League-sanctioned National Database in view of their teetering conclusions.

SERA releases publication rights to their indexes only if published per their database without conflict from other groups. They also are the only regional coordination organization to publish their own master coordination register ...the *Repeater Journal*, a quarterly slick magazine mailed to repeater owners and users throughout their seven state coordination area. It is also sold at all major amateur equipment outlets and hamfests in the southeast. SERA maintains the *Journal* is the only viable alternative in their region to the ARRL's *Repeater Directory*.

## RADIO SHACK BACK IN HAM EQUIPMENT

In what was one of the industry's worst kept secrets, Radio Shack has confirmed that it is indeed going back into the ham radio equipment business. Although never denying the allegation, Tandy's Consumer Marketing VP, **Bob Miller/AA5FL**, said it was standard Radio Shack policy never to release information on new products until they were available. Radio Shack did, however, release the information on its new 10-meter transceiver to their managers during their August fall/Christmas sales meeting. Miller has now confirmed that the transceiver will be available about December 15. Full page ads are planned for the December issues of CQ, Ham Radio and QST. Bob sent us an advance copy before leaving for the orient on a buying trip.

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\$1.00 postpaid  
\$2.00  
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Technician - Element 3(A)  
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Order From:

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The Perfect First Radio for Novices  
...Just in Time for Christmas



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Pushbutton selectors on the mike permit safe and easy QSY while mobiling and a 10-channel memory stores favorite frequencies. A front-panel frequency-lock switch prevents accidental frequency changes. You can fine-tune reception with  $\pm 1.5$  kHz RT and select 25-watt or 5-watt QRP output. Coverage is 28.0 to 29.6999 MHz, SSB or CW with convenient built-in sidetone and semi break-in keying.

The HTX-100 also has an easy-to-see backlit LCD display, hefty 3-watt audio output, built-in speaker, and rear-panel jack for adding an external speaker. Bracket and DC cord included. The 10-meter fun is just beginning. Be a part of it with this affordable, top-quality transceiver!

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• We got a note from **Bob Vallio/W6RGG**, secretary of the *YASME Foundation* telling us that **Iris/W6QL** and **Lloyd/W6KG Colvin**, the DX-globetrotters are at it again! They left last week for Cyprus and will be gone on an extended DX-pedition lasting several months! Bob said that they should already be on the air ...and will be roaming around other DX spots in Asia and Africa "where ever they can obtain permission to operate." Iris and Lloyd will be operating all bands, half SSB and half CW although "they prefer the lower ends of all bands." Bob also asked that you *only work them once* per band. "Please no duplicate or insurance QSO's...." Iris and Lloyd will be using only one call in a country "...although both of them always hold a license. They will use Iris' call in one country ...and then use Lloyd's call in the next country." They won't be returning to the United States until next Spring ...probably in time for Dayton.

• And while we are on the subject of DX, let us add that **Eric L. Scace/K3NA** should now be on the air from *Rotuma* in the south pacific ...north of the Fiji Islands. They were scheduled to arrive on October 21st and operate through November 4th. The ARRL's *DX Advisory Committee* is expected to begin deliberations on DXCC country status for *Rotuma* in late November or early December. QSL cards should be sent direct to Eric (10701 Five Forks Road, Frederick, MD 21701) or via the *Northern California DX Foundation*, c/o Ross Forbes/WB6GFH, PO Box #1, Los Altos, CA 94023. Contributions (tax deductible) to help offset the costs of the *Rotuma* DX-pedition may be enclosed with QSLs. (Checks should be payable to the *Northern California DX Foundation - Special Projects Fund*.)

• **Myron Braun/K8IQB** (202 Howard St., Bellvue, Ohio 44811) said he monitored a "very raw" CW message at 19:45 p.m. GMT on October 4, 1988 that may have been a hoax. The message, an SOS, said "We are 50 miles north of Hanoi in guerilla antigovernment camp - Name is John Getton - Please inform high authorities from USA 700 US people in compound --- Please save us." The signal then went QRT. He would like to know if anyone else monitored the same transmission. Braun got in contact with a federal government agency in Cleveland, Ohio, and provided full information. Transmission heard on 28.159 MHz, antenna heading: approximately 347 degrees.

• **Dave Heller, K3TX**, writes that the state of Pennsylvania has approved a new series of auto

plates reading "*Amateur Radio Operator*." Amateurs wanting full information and expedited assistance in getting them may send SASE to K3TX. (250 Alden Avenue, Yardley, PA 19067.)

• We understand that a **protest is being organized** at various federal court houses across the country (2:00 p.m. local time, Sunday, November 27th) to call attention to the unfair reallocation of 220-222 MHz to the land-mobile service.

• A major article appears in the October 1988 issue of *Soviet Life* on the **Transpolar Ice Odyssey**, the ski-trek from the Soviet Union across the North Pole to Canada. The front page full-color photograph shows the expedition at the top of the world, complete with a McDonald's banner ...one of the sponsors. The story, entitled "*90 Days over the Ice*" does cover the satellite navigation system, but never mentions the fact that all Canadian and Russian expeditioners are ham operators ...or the important part that amateur radio plays in the 1800-km adventure! *Soviet Life* is distributed in the United States in exchange for the United States' right to distribute *America* magazine in the USSR.

• **Jack Ravencroft, VE3SR**, of Kanata, near Ottawa, Canada, died October 19. What was thought to be a stroke was found to be a massive brain tumor. He had been ordered off the amateur air waves as a result of a lower court decision finding him guilty of being a "nuisance." A neighbor had brought suit against him; charging that his amateur radio station interfered with the operation of their household appliances ...even though the Canadian *Department of Communications* had given Jack's amateur radio station a clean bill of health. Amateurs around the world contributed to a defense fund to assist him with his legal expenses and appeal. So ends very tragically a saga of four years of harassment, worry and frustration for Jack and Helen Ravenscroft.

... ..

## CANADA RESTRUCTURES HAM RADIO

A massive effort is nearing completion north of the border to dramatically restructure the Amateur Radio Service in Canada. *Communications Canada*, the Canadian government telecommunications agency previously known as the *Department of Communications (DOC)* has just released a new draft of RIC-24. *Radio Information Circular-24* covers basic information to individuals who wish to become Canadian amateur radio operators. It is

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somewhat comparable to our *\$Part 97 Rules*.

The Canadian amateur restructuring program has been nailed down and very little is now open to further public involvement. All that remains, according to **R.W. Jones, Director-General** of Communication Canada's *Radio Regulatory Branch* in Ottawa are "implementation decisions."

Not much has been published in the United States about the massive Canadian amateur radio changes now in the process of enactment. The following is a blow-by-blow account covering exactly three years of government, amateur and public involvement on how it all came about.

## CURRENT CANADIAN HAM CLASSES

There are currently three amateur operator classes in Canada. They are:

**AMATEUR CERTIFICATE** - requires 10 words per minute Morse code proficiency plus a written test and authorizes telegraphy on all bands and phone operation above 30 MHz. Additional privileges via the endorsement route can be phased in after a certain period of time.

**ADVANCED CERTIFICATE** - requires 15 wpm code and a more advanced/detailed theory exam. Authorizes all emissions below 30 MHz.

**DIGITAL CERTIFICATE** - no code proficiency, but an extremely difficult written/essay type examination on digital communications theory is required. Operation restricted to all modes above 30 MHz. All Canadian ham classes authorize a power level of 1000 watts. There is no equivalent to the U.S. Novice class in Canada at present.

## RESTRUCTURING BACKGROUND

In November 1985, the Canadian government issued a *Discussion Paper on a Possible Restructuring of the Amateur Radio Service in Canada*. This vehicle, basically the same as our FCC *Notice of Inquiry*, said the primary interests of amateurs in Canada included public service, recreation and technical experimentation ...although there are many others. "Because of this diversity," they said, "DOC has received suggestions for changes in a number of areas from both aspiring and existing amateurs." DOC mentioned Morse code and technical standards as being the two most frequently mentioned "...with both support for and objections to current certificate requirements." [Canadian amateurs obtain amateur radio operating *certificates*

...not licenses.]

The document said it is suggested that a Morse code test, especially for high-frequency operation (below 30 MHz) is irrelevant now that there are devices capable of transmitting and receiving Morse code automatically, and that the Morse code requirements really should be waived for candidates who will equip their stations with such devices. However, it noted that Morse code proficiency is required by Canada's international obligations as a member of the ITU. "We must therefore adhere to *ITU Radio Regulation No. 2735...*" [RR-2735 requires that amateur operators shall prove they can send by hand and receive correctly by ear texts in Morse code signals when operating below 30 MHz.]

The document also said "Because technology is advancing so rapidly, DOC must update the examination content more frequently and, thus, require a broader knowledge of candidates. In this respect, it has been pointed out that some aspiring amateurs, particularly senior citizens, have not had any recent formal education and are at a disadvantage in attempting to absorb the amount of material necessary to pass the technical examination. Comments received state that the technical content of the examination is inappropriate for those whose primary aim is to communicate, and that the traditional role of the amateur as a designer and builder of stations is no longer the primary activity. At present, amateurs seem to be increasingly engaged in public service and recreational communication activities using commercially manufactured and serviced equipment."

"The incorporation of computer technology into amateur activities has hastened this change in role. As a result, today's amateurs have the opportunity to operate stations that are smaller, more stable, reliable and versatile than those of 10 years ago. In addition, there is heightened interest in radioteletypes, AMTOR (*Amateur Teletype Over Radio*), machine-generated Morse code and packet radio communications. The increasing use of digital technology by Canadian amateurs is attributed less to the availability of the *Digital Certificate* than to affordable personal computers. In fact there is a similar increase in the use of computers in amateur radio in countries where there is no equivalent to Canada's *Digital Certificate*. To date, only 50 individuals have entered amateur radio via the computer hobbyist route; that is they took the examination and obtained the *Amateur Digital Certificate*.

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DOC statistics show that approximately 75 percent of the 198 *Digital Certificates* issued since 1978 were to individuals who already held another amateur certificate."

"Amateurs and their associations have stated that newly certified amateur operators do not have sufficient knowledge of correct operating procedures and practices, and that the examination pass-rate is too low. This low pass-rate may be attributed partly to the practice of granting candidates one year's credit for any successfully completed portion of the Amateur examination. (Advanced Amateur examination credits are valid for life.) Although this practice may have some merit, it tends to encourage individuals who are not sufficiently prepared to repeatedly try the examination. Nevertheless, this does indicate that too much emphasis may be placed on the technical aspects and not enough on the operating portion of the examination."

## STRUCTURES IN OTHER COUNTRIES

Canada also analyzed information on amateur radio licensing from 16 foreign countries and "...observed that there is a wide variation in the various structures; one nation offers two amateur certificates, another offers five and the remainder range between those two figures. No other country issues an *Amateur Digital Radio Operator's Certificate* or its equivalent."

"Most administrations offer a "no-code" certificate and, with one exception [Japan which also has more amateurs than any country in the world ...more than one million], permit operation under such a certificate only on Very High Frequency (VHF) and higher amateur bands. In most cases, the written portion of the no-code certificate is the same as that of the "code" certificate and an amateur may upgrade from a no-code to a code certificate simply by taking a Morse code test (in most cases at 12 words per minute). On successful completion, the amateur is issued a certificate allowing full privileges."

The DOC also acknowledged that most countries offer a Novice class requiring a Morse code test at a speed of 5 words per minute and a simple theory and regulations test. "In general," the DOC wrote, "most administrations have three levels in their [amateur licensing] structure: novice, general and VHF-only. The DOC also mentioned

that there does not seem to be any consistency in the maximum power levels permitted for amateur operations; levels range from 100 watts to 1000 watts d.c. input power to the final stage, with most being around 500 watts. The majority of administrations increase the maximum power commensurate with the grade [of license] issued. Canada, therefore, appears to be one of the few nations that permits a maximum power of 1000 watts d.c. input regardless of the [license] held by the amateur."

## THE INITIAL 1985 DOC PROPOSAL

The Canadian government said that any Amateur Radio restructuring proposal adopted must:

- (1.) conform with international ITU regulations;
- (2.) not increase demands on departmental resources and, if possible, reduce these from the present level;
- (3.) provide maximum benefit to an optimum number of qualified applicants, thereby encouraging radiocommunication skills; and
- (4.) wherever possible, institute a general policy of deregulation that retains or enhances the role of amateur organizations.

The DOC offered for public comment an amateur radio licensing structure suggesting three license classes:

(1.) **Certificate "A"** - certifies an individual to operate a basic, commercially built, modern amateur station designed to operate on any amateur radio frequencies above 30 MHz. An examination would be required to operate commercially built/marketed equipment at a maximum power input of 250 watts d.c. Repeater and remote base station operation would not be permitted.

(2.) **Certificate "B"** - authorizes an individual (who also holds Certificate(s) "A," or "A" and "C") to operate below 30 MHz. A Morse code test at a speed of 12 words per minute is required and authorizes all emissions on any amateur band.

(3.) **Certificate "C"** - allows an individual (who also holds Certificate(s) "A" or "A" and "B") to construct and operate any station or to be the licensee of a repeater or other non-standard station. 1000 watts d.c. input authorized.

## CANADIAN HAM GROUPS RESPOND

On May 10, 1986, the *Canadian Amateur*

AMECO LICENSE PREPARATION MANUALS - Contain all Amateur  
Rad' Exam Ion btion hult cho  
NOVICE AMATEUR RADIO COURSE - Complete with 2 cassette Morse  
code be a... Iustr... I text... k in... lder leryt Jyou Id

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Radio Federation, Inc. (CARF) and the Canadian Radio Relay League, Inc. (CRRL) sent in joint comments with a counter proposal with their view on how the Amateur Radio Service in Canada should be restructured. They said Canada needed more and younger amateurs, high standards and strong incentives to upgrade. Although they favored a beginning no-code license, a continuing role for Morse code was felt important. The *Canadian Radio Relay League*, previously an ARRL division, had begun thinking independently.

The joint CRRL/CARF working group opposed any ban, however, on homebuilt or modified transmitting equipment. They also said it was important that any new amateur licensing structure be compatible with other nations with which Canada has reciprocal operating agreements.

The CARF/CRRL comments suggested that the Amateur Radio Service entry level should be *Certificate "B" for "Basic"* - but with the same language as the DOC's *Certificate "A"*. Other features included: no requirement for Morse code proficiency, a written examination based on 40 hours of study, a 100 watt power limitation and homebuilt or modified transmitting equipment permitted. A 5 wpm Morse code endorsement would allow telegraphy below 30 MHz plus ten meter phone operation ...and a power increase to 250 watts.

The *Certificate "A"* or "*Advanced*" class would be based on 20-30 hours of study and require a 12 wpm code exam. Privileges would include full maximum legal power and the ability to establish repeaters or remote base stations.

The CARF/CRRL counter proposal supported a logical progression from local to regional ...to worldwide communications. They had reservations, however, about licensing some amateurs as "communicators"...and some as "builders." The "communicators" might be perceived as insufficiently trained and technically inferior.

"Even in Japan, where amateurs holding certain classes of licenses must use approved transmitting equipment, it is still possible for those amateurs to build their own transmitting equipment and have it approved," CARF/CRRL said. They suggested a system of allowing top level amateurs to approve the transmitting equipment of lower level builders ...or home brew transmitters up to 10 watts without being checked out.

In total, the DOC received 594 comments on their *Discussion Paper* - 86% from amateurs, 14% from non-amateurs. Most were in favor of the proposal - or in favor with modifications. The comments resulted in the DOC adding an additional certificate, the 5 wpm or "B" certificate. The previous "B" became "C" and "C" became "D."

## COMMUNICATIONS CANADA RESPONDS

In a September, 1988, letter to **Tom Atkins/VE3CDM**, CRRL president, **R. W. Jones, Director-General** of Communication Canada's *Radio Regulatory Branch* made the following points:

- (1) The new amateur radio structure will be based on a modular approach ...aspiring amateurs may take any or all of the module tests at any time.
- (2) "We believe the labels '*Communicator*' and '*Builder*' are misleading. Holders of the lowest amateur class license will be permitted to build and/or install receivers, modems, antennas, feedlines, monitoring circuits like power meters, SWR bridges and RF noise bridges." In addition, the lowest amateur class is allowed to construct transmitters from commercially available kits.
- (3) "We have just confirmed that the Japanese administration does have an inspection program that allows the certification of home built transmitting equipment. ...the inspection fee is 9500 yen ...approximately \$85 in Canadian funds. ...we are not considering a type approval program for Canadian amateur transmitters ...it could be considered an option in the future. ...I am ...reluctant to propose an additional burden in a deregulatory environment."
- (4) "We believe that home built and higher power transmitters ought to be in the hands of those who are tested as being capable of using them without causing problems. On the other hand, there are many licensed and prospective amateurs who have no interest in using high power or building their transmitters. Therefore, we can see no logic in examining their technical competence of building a transmitter if typical commercial transmitting apparatus satisfies their needs."
- (5) "We wish to point out that the restructuring will have little or no effect upon the used equipment market, an economical option for any aspiring amateur. Clearly, making commercially, designed, lower-powered transmitters available to this group is consistent to the government's policy of deregulation."

(6.) "After examining the current amateur practices, it was determined that it was no longer necessary to be able to build transmitters in order to become an amateur radio operator."

(7.) "...the public consultation process [has] culminated in a structure which is now in the process of being implemented and that [is] what is open for discussion ...the implementation plan ...including the examination content."

(8.) "I am sure that you will agree with me that the Canadian public has long awaited this restructuring of the amateur service and further delay is not warranted."

## DETAILS OF CANADIAN RESTRUCTURING

There will be four classes of Amateur certificates available:

<u>Cert.</u>	<u>Test:</u>	<u>Privileges:</u>
"A"	Regulations, procedures, basic theory	All ham bands above 30 MHz All emissions/modes 250 watts input Commercial transmitters only
"B"	5 wpm code (25 char./minute for 3 minutes) (Cert. "A" and/or "D" must also be held)	All ham bands below 4 MHz All emissions/modes 250 watts input Commercial transmitters only
"C"	12 wpm code (60 char./minute for 3 minutes.) (Cert. "A" and/or "D" must also be held)	All ham bands below 30 MHz All emissions/modes 250 watts input Commercial transmitters only
"D"	Advanced theory - (Cert. "A" must be held.)	1000 watts input Homebuilt Transmitters Sponsor repeaters/club sta. Operate remote control links

## WRITTEN EXAMINATION PROCEDURE:

A fee of \$5.00 is charged for each examination administered by officials of the *Department of Communications*. Each candidate is given a booklet containing the questions, needed formulas and an answer sheet. Mathematical tables and non-programmable calculators may be used but are not supplied. A pass-mark of 60% is required. The "A" certificate is comprised of 100 multiple choice

questions on which at least 25 are based on domestic and international regulations and the remainder on theory and operating procedures. The "D" certificate consists of 50 multiple choice questions on advanced radio theory.

There will be five question banks for the "A" and "D" certificates. The "A" certificate written examination will be compiled from the following: A1 - Basic Electronics, A2 - Propagation, Antennas, Transmission Lines & Matching Devices, A3 - Interference & Suppression, A4 - Operations, Procedures and Regulations and A5 - Station Assembly. Emphasis will be on amateur procedure and operation.

The "D" Certificate written examination will be compiled from the following: D1 - Circuit Analysis, D2 - Digital Techniques, D3 - Transmitters, Receivers, Linear Amplifiers & Modulation Techniques, D4 - Propagation, Antennas, Transmission Lines & Matching Devices and D5 - Test Equipment and Construction Techniques. Emphasis will be on electronic theory.

## MORSE CODE EXAMINATIONS:

...are administered in plain language and may include the 26 letters; the 10 numbers and the comma, period, question mark, dash and slant bar. (No operating prosigns.) A mark of 100% is awarded for 5 errors or less, 99% for 6, 98% for 7, 97% for 8, etc. The examiner will allow two minutes for the candidate to review and correct their copy before it is graded. The pass-mark is 100 percent.

If a candidate achieves over 50% on the 12 wpm Morse code test then credit is given for 5 wpm. If the code test is administered by volunteer examiners, the *attestation* will remain in the possession of the candidate until the appropriate certificate is issued. An *attestation* is a signed statement by at least three certified "C" class amateur operators.

Existing amateurs who hold the "Amateur" certificate are deemed to hold the "A", "C" and "D" certificates. Those who hold the *Amateur Digital* certificate are deemed to hold the "A" and "D" certificates.

The next step is a notice in the *Canada Gazette* and an opportunity for public comment on implementing the restructuring. We'll keep you posted. See you in two weeks ...de Fred/W5YI